

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Previously Presented) A serial link transceiver with defect-detecting capability, comprising:

a differential transmitter configured for differential signal transmission;

a differential receiver configured to receive a differential signal from the differential transmitter;

first and second differential transmission lines that are AC-coupled between the differential receiver and the differential transmitter; and

wherein the differential receiver includes a monitoring system that detects a defect in one of the differential transmission lines, the monitoring system determining the defect based on a common mode signal threshold detected in the differential signal received at the receiver; and

wherein the monitoring system is configured to detect short circuits across AC-coupling capacitors in one of the AC-coupled differential transmission lines.

2. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system detects one of:

open circuits in one of the transmission lines;

short circuits between one or more of the transmission lines and a power supply or ground plane; and

short circuits between the transmission lines.

3. (Cancelled)

4. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is coupled directly to one of the differential transmission lines.

5. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is coupled indirectly to one of the differential transmission lines.

6. (Cancelled)

7. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the differential receiver comprises a common mode control circuit coupled to the differential transmission lines, and the monitoring system is coupled to an output of the common mode control circuit.

8. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 7, wherein the monitoring system comprises a current monitoring system.

9. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 7, wherein the monitoring system comprises a voltage monitoring system.

10. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system comprises a voltage monitoring system.

11. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system comprises a current monitoring system.

12. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 8, wherein the current monitoring system is configured to sense alternating current provided by the common-mode control circuit.

13. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 8, wherein the current monitoring system is configured to sense direct current provided by the common-mode control circuit.

14. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 8, wherein the current monitoring system is configured to sense alternating current and direct current provided by the common-mode control circuit.

15. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when an alternating current is detected exceeding a predetermined threshold.

16. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when direct current is detected exceeding a predetermined threshold.

17. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when no signal is received by the differential receiver and a current is sensed by the monitoring system.

18. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect upon any of the following conditions:

alternating current is detected exceeding a predetermined threshold;

direct current is sensed by the current monitoring system is detected exceeding a predetermined threshold; or

no signal is received by the differential receiver and a current is sensed by the current monitoring system is detected exceeding a predetermined threshold.

19. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when an open circuit exists in one or more of the differential transmission lines.

20. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring is configured to output an indication of a defect when a short

circuit exists between one or more of the differential transmission lines and a power supply.

21. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when a short circuit exists between the differential transmission lines.

22. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when a short circuit exists across an AC coupling in one or more of the AC-coupled differential transmission lines.

23. (Currently Amended) The [[apparatus]] serial link transceiver according to claim 1, wherein the monitoring system is configured to output an indication of a defect when an open circuit exists in one or more of the differential AC-coupled transmission lines, when a short circuit exists between one or more of the differential AC-coupled transmission lines and a power supply, when a short circuit exists between the differential AC-coupled transmission lines, and/or when a short circuit exists across an AC coupling in one or more of the differential AC-coupled transmission lines.

24-30 (Cancelled)